

**REMARKS**

**I. Introduction**

This Amendment is being filed concurrently with a Request for Continued Examination.

In response to the Office Action dated September 21, 2005, Applicants have amended claims 11 and 31 in order to overcome the § 112 rejections and to further clarify the subject matter of the present invention. Support for these amendments can be found, for example, on page 10, lines 14-24 and Fig. 2A of the specification. No new matter has been added.

Applicants note with appreciation the indication by the Examiner, in a telephone conversation, that for the reasons reiterated below, which were also discussed during the interview, the amendments to claims 11 and 31 would likely place claims 11 and 31 and all pending dependent claims thereon in condition for allowance.

For the reasons set forth below, Applicants respectfully submit that all pending claims are patentable over the cited prior art references.

**II. The Rejection Of Claims 11 And 31 Under 35 U.S.C. § 102 and § 103**

Claim 11 was rejected under 35 U.S.C. § 102(b) as being anticipated by Pankove (U.S. 3,922,703) and Mikoshiba et al. (U.S. 4,511,816). Furthermore, the Examiner has rejected, under 35 U.S.C. § 103(a), claims 11 and 24 over Nishimura (U.S. 5,081,519) in view of Tischler et al. (U.S. 5,679,152); claims 11, 24 and 25 over Nishimura in view of Molnar (U.S. 6,086,673); claims 28-32 over Nishimura in view of Tischler in view of Olsen et al. ("Calculated Stresses in Multilayered Heteroepitaxial Structures") or alternatively, Mikoshiba et al. Applicants respectfully traverse these rejections for at least the following reasons.

Claims 11 and 31, as amended, both recite, in-part, an epitaxial growth method comprising growing an epitaxial layer on a layered substrate, wherein the layered substrate

comprises sapphire on silicon, wherein the epitaxial layer is grown on the opposite side of the sapphire from that of the silicon layer.

In each of the above cited prior art references, the epitaxial layer is grown on the same side of the sapphire as the silicon layer. For example, see Pankove (see, col. 2, lines 40-68 and Fig. 1), Mikoshiba (see, col. 9, lines 25-40 and claims 1 and 22) and Nishimura (see, Abstract, col. 1, lines 1-10 and col. 2, lines 20-55). Therefore, in contrast to the present invention, neither Pankove, Mikoshiba, Mishimura, Tischler, Molnar nor Olsen, nor any combination of the above, disclose an epitaxial growth method comprising growing an epitaxial layer on a layered substrate, wherein the layered substrate comprises sapphire on silicon, wherein the epitaxial layer is grown on the opposite side of the sapphire from that of the silicon layer.

As anticipation under 35 U.S.C. § 102 requires that each element of the claim in issue be found, either expressly described or under principles of inherency, in a single prior art reference, *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 218 USPQ 781 (Fed. Cir. 1983), and at a minimum, Pankove, Mikoshiba, Mishimura, Tischler, Molnar and Olsen do not disclose an epitaxial growth method comprising growing an epitaxial layer on a layered substrate, wherein the layered substrate comprises sapphire on silicon, wherein the epitaxial layer is grown on the opposite side of the sapphire from that of the silicon layer, it is clear that Pankove, Mikoshiba, Mishimura, Tischler, Molnar and Olsen fail to anticipate claims 11 and 31 of the present invention, or any pending dependent claims thereon.

Furthermore, as none of the cited references suggest growing the epitaxial layer on the opposite side of the sapphire from that of the silicon layer, the cited references do not render the claimed invention obvious.

**III. All Dependent Claims Are Allowable Because The  
Independent Claim From Which They Depend Is Allowable**

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claims 11 and 31 are patentable for the reasons set forth above, it is respectfully submitted that all pending dependent claims are also in condition for allowance.

**IV. Conclusion**

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication of which is respectfully solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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